

REMARKS

Claims 1-25 are pending in the case.

It is the belief of the Applicants that the claims of the present invention are directed to a common subject matter and the search and examination of the entire application can be made by the Examiner without serious burden.

Claims 1-6 and 8 (Group I), Claims 1, 7, and 18-25 (Group II), and Claims 9-17 (Group III) all relate to, *inter alia*, encoding cross-fades.

The Examiner stated the following in the Office Action:

The inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of the Group I invention is the particular motion compensation unit claimed therein; the special technical feature of the Group II invention is the particular CODEC claimed therein, while the special technical feature of the Group III invention is the particular cross-fades between pictures encoding method claimed therein. Since the special technical features of the Groups I-III inventions are not present in the other groups, respectively, unity of invention is lacking.

The Applicants respectfully disagree with the Examiner's characterization of special technical features of the Groups I-III.

For example, with respect to Group I, the Examiner has stated that the special technical feature thereof is the particular motion compensation unit claimed therein. However, Claim 1 does not even include or even mention once "motion compensation", let alone "a motion compensation unit" as alleged by the Examiner. Hence, it is respectfully asserted that the Examiner's characterization of Group I and, particularly Claim 1 that belongs thereto, is erroneous.

Moreover, with respect to Group II, the Examiner has stated that the special technical feature thereof is the particular CODEC claimed therein. However, it is first noted that Claim 18 is a dependent claim, which depends from Claim 1 and, thus, includes all the limitations of Claim 1. Further, the Examiner's characterization is clearly too broad and does not accurately reflect at all the special technical feature of Claim 18, which is the same special technical feature recited in Claim 1 (given the above stated dependency). For example, it cannot be reasonably stated that the special technical feature of Claim 18 is simply a CODEC. The Examiner assertion is analogous to a claim that simply recites a CODEC without any more, which is clearly an inaccurate characterization of Claim 18. Given such broad interpretation of the special technical features by the Examiner, it would certainly seem plausible and appropriate for "encoding cross fades" to be considered the COMMON special technical feature present in all three Groups I-III.

Further, with respect to Group III, the Examiner has stated that the special technical feature thereof is the “particular cross-fades between pictures encoding method claimed therein”. Initially, the Applicants respectfully assert that the preceding reproduced reasoning by the Examiner is again too broad a characterization of Claim 9 (the independent claim of Group III) and fails to fully address the pending limitations therein.

In view of the preceding, it is first respectfully argued that Group II should be dispensed with right at the onset, given the fact that all of the Group II claims are dependent from Claim 1. That is, while Group I (which includes Claim 1) is directed to an encoder, the CODEC recited in the Group II claims include the encoder recited in Claim 1. It is this common subject matter from Claim 1 that ties these groups (I and II) together to provide unity of invention, and renders the restriction requirement asserted there against improper. For example, MPEP 608.01(i) sets forth the following: “Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim.” It is clear that Claim 18 is a proper dependent claim, since it refers back to Claim 1 and further limits the subject matter of Claim 1. For example, MPEP 608.01(n) sets forth the following (emphasis added): “One or more claims may be presented in dependent form, referring back to and further limiting another claim or claims in the same application.”

While the Examiner has asserted in a telephone conference regarding this restriction requirement that the form of Claim 18 (the first claim recited in a CODEC in the Group III claims) should have been an independent claim and that such form is typically used by applicants to avoid paying for an extra independent claim, it is respectfully pointed out that the

instant case has only 2 independent claims. Further, Claim 18 is a proper dependent claim, as defined in MPEP 608.01(n) reproduced above for the Examiner's convenience. Moreover, the Examiner is reminded of the following, as set forth in MPEP §608.01(n): "a dependent claim may refer back to any preceding independent claim" (emphasis added).

Hence, based on the preceding, Group II should be dispensed with, as any restriction between Group I and Group II is improper for at least the reasons set forth above.

Regarding Group III, said group is similar to Claim 1 (Group I) and Claim 18 (Group II) in that it is directed to encoding. Moreover, Group III, similar to Claim 1 (Group I) and Claim 18 (Group II), it is directed to encoding cross-fades. Further, the limitations of Claim 11, which depends from Claim 9, essentially brings that combination in alignment, special-technical-feature-wise, with Claim 1 (Group I) and Claim 18 (Group II). Thus, in view of the preceding, it is respectfully asserted that common subject matter exists between Group III and the remaining groups (Group I and Group II), and that any searching required by the Examiner would not present any extra burden on the Examiner.

In the Office Action, the Examiner further asserted that the application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1. The Examiner asserted that Figure 2 of the application relates to a first species (hereinafter "species 1"), and that Figure 3 of the application relates to a second species (hereinafter "species 2"). The Examiner then characterized Claims 1-6 and 9 as pertaining to species 1, and Claims 11, 7, and 18-25 as pertaining to species 2.

It is noted that the claims characterized as pertaining to species 1 also pertain to Group I, and the claims characterized as pertaining to species 2 also pertain to Group II. Hence, in view of the arguments set forth above regarding Groups I and II, it is respectfully asserted that such characterizations are improper and should be withdrawn. For example, both species clearly pertain to a single inventive concept. If the preceding were not true, then the Applicants respectfully inquire of the Examiner as to how species 1 and species 2 could both include independent Claim 1, which clearly represents a single general inventive concept with respect to the claims asserted by the Examiner as pertaining to species 1 and species 2. In view of the preceding, the Examiner's supportive reasoning seems flawed. For example, the Examiner stated the following:

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: the special technical features of the species 1 invention is the particular implicit reference picture weighting for video cross-fades claimed therein while the special technical feature of the species 2 invention is the particular explicit reference picture weighting for video cross-fades claimed therein. Since the special technical feature of the species 1 invention is not present in the species 2 invention and the special technical feature of the species 2 invention is not present in the species 1 invention, unity of invention is lacking.

The preceding support reasoning by the Examiner seems flawed because both species 1 and 2 include Claim 1, which sets forth the single general inventive concept and, thus provides unity of invention to the claims asserted by the Examiner as pertaining to species 1 and species 2. It is quite clear that Claim 1 relates to a single general inventive concept since both the group of claims (except Claim 1) asserted by the Examiner as pertaining to implicit reference picture weighting and the group of claims (except Claim 1) asserted by the Examiner as pertaining to explicit reference picture weighting, all depend from Claim 1. Thus, it is clear that Claim 1 applies to both implicit and explicit reference picture weighting. For example, as set forth in MPEP 806.04(d) “[i]n an application presenting three species illustrated, for example, in Figures 1, 2, and 3, respectively, a generic claim should read on each of these views.” In this case, Claim 1 clearly reads on each of Figures 1 and 2, with such interpretation by the Applicants supported by the Examiner’s use of Claim 1 in both species 1 and species 2. This is further bolstered by the following in MPEP 806.04(d): “[i]n general, a generic claim should require no material element additional to those required by the species claims, and each of the species claims must require all the limitations of the generic claim.” With respect to the last reproduction from MPEP 806.04(d), again the Examiner’s use of Claim 1 in both species is in alignment with the very definition of a generic claim set forth therein.

Further, MPEP 806.04(h) states that the species must be patentably distinct from each other and “[i]n making a requirement for restriction in an application claiming plural species, the examiner should group together species considered clearly unpatentable over each

other.” However, claims relating to the reference picture weighting being implemented in an implicit mode and claims relating to the reference picture weighting being implemented in an explicit mode should be grouped together, as such modes simply relate to how the parameters are determined at a decoder (i.e., explicitly received or derived), noting that all the claims in issue relate to encoding.

MPEP 803.01(I) sets forth the following:

There are two criteria for a proper requirement for restriction
between patentably distinct inventions:

(A) The inventions must be independent ... or distinct ... as
claimed; and

(B) There would be a serious burden on the examiner if restriction
is not required....

MPEP 802(I) states that “[t]he term ‘independent’ (i.e., unrelated) means that there is no disclosed relationship between the two or more inventions claimed, that is, they are unconnected in design, operation, and effect.” In this case, the claims of all the groups and all the species are, in fact, connected in design, operation, and effect, with respect to implementing the encoding of cross-fades. While Figure 2 relates to an implicit mode and Figure 3 relates to an explicit mode, the only differences between these two modes is that “[i]n explicit mode, these parameters are coded in the slice header. In implicit mode, these parameters are derived” (see,

e.g., Applicants' specification, p. 6, lines 2-3). Hence, any variations between the two modes pertain to how the weighting parameters are conveyed to/determined by a decoder, and not to how the encoder itself will determine the weights and apply the weights. Hence, with respect to determining and applying the weights at the encoder (to which all of the pending claims of both species are directed), the design, operation, and effect are essentially the same.

With regard to burdening the Examiner, as noted above, the dependent claims such as Claim 11 (which depends from independent Claim 9 and, thus, includes all the limitations of Claim 9) essentially cover similar limitations as Claim 1, thus requiring no extra burden on the Examiner. That is, given the similarity of recited features, it is respectfully submitted that serious burden would not be placed on the Examiner to search the common subject matter and examine all the groups together, obviating the need for restriction, and further tying up the Patent Office with two cases that can be efficiently handled in one case.

With both prongs that are needed for a proper restriction requirement being absent in this case, it is respectfully asserted that the restriction requirement should be withdrawn for at least the preceding reasons.

Nonetheless, it is recognized that in order for this paper to be responsive to the Office Action, an election must be made. In the Office Action, restriction has been required to one of the following groups of claims:

- (I) Claims 1-6 and 8;
- (II) Claims 1, 7, and 18-25; and
- (III) Claims 9-17.

Accordingly, claims of Group (I) are elected for examination at this time with traverse. Should the Examiner not reconsider the present position, Applicant reserves the right to pursue the remaining claims of the remaining groups by way of one or more separate divisional applications, and/or re-join the divided species claims should generic linking Claim 1 ultimately be deemed allowable.

In view of the foregoing remarks, Applicants respectfully request reconsideration of the restriction requirement. Early and favorable action of the case is respectfully requested.

Respectfully submitted,

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